

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed January 13, 2005. Upon entry of the amendments in this response, claims 19-38 remain pending. In particular, Applicant has amended claims 19, 20 and 28-32, and has added claims 33-38. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

Indication of Allowable Subject Matter

The Office Action indicates that claims 28-32 would be allowable if rewritten in independent form to include all the limitations of the base claims and any intervening claims. In this regard, Applicant has amended claim 29 to be in independent form, and respectfully asserts that claim 29 is in condition for allowance. Additionally, Applicant has amended the dependency of claims 28 and 30-32 such that each of these claims now depends from claim 29. Therefore, Applicant respectfully asserts that these claims are in condition for allowance.

Double-Patenting Rejection

The Office Action indicates that substantially duplicate claims exist in the application and that such claims are rejected. In this regard, Applicant is unable to identify any substantially similar claims in the application and respectfully asserts, therefore, that the rejection has been lodged in error. Irrespective of the apparent inapplicability of the rejection, Applicant has amended several of the pending claims and respectfully asserts that such amendments may have alleviated any concerns related to double patenting of which Applicant is unaware.

Rejections under 35 U.S.C. 112

The Office Action indicates that claims 19 and 20 are rejected under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. As set forth above, Applicant has amended these claims and respectfully asserts that the rejection has been rendered moot.

Rejections under 35 U.S.C. 103

The Office Action indicates that claims 19, 21-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatenable over *Furukawa* in view of *Sneh*. Applicant respectfully traverses the rejections.

In particular, Applicant has amended claim 19 to recite:

19. (Currently amended) A random access memory (RAM) capacitor in a shallow trench isolation comprising:

- a substrate having said shallow trench isolation surrounding active device areas;

- a pad oxide layer on said substrate;

- a first hard-mask layer on said pad oxide layer;

- recesses in said first hard-mask layer, said pad oxide layer, and partially within said shallow trench isolation and said recesses extending under said first hard-mask layer to said substrate and ***said recesses having lower portions and upper portions, said upper portions being narrower than said lower portions***;

- a conformal first conducting layer in said recesses for capacitor bottom electrodes;

- an interelectrode dielectric layer over said bottom electrodes; and

- a conformal second conducting layer that fills said recesses sufficiently

- thick to form a planar surface over said recesses.

(Emphasis Added).

Applicant respectfully asserts that the cited art, either individually or in combination, does not teach or reasonably suggest at least the features/limitations emphasized above in claim

19. Specifically, *Furukawa* and *Sneh* both teach recesses that exhibit a constant width from top

to bottom. Therefore, Applicant respectfully asserts that claim 19 is in condition for allowance.

Insofar as claims 20 - 27 are dependent claims that incorporate the features of claim 19, Applicant respectfully asserts that these claims also are in condition for allowance. Additionally, these claims recite other features that can serve as an independent basis for patentability.

Newly Added Claims

Upon entry of the amendments in this response, Applicant has added new claims 33 – 38. Applicant respectfully asserts that these claims are in condition for allowance. Specifically, these claims are dependent claims that incorporate the features/limitations of claim 29, the allowability of which is set forth in the Office Action.

Cited Art of Record

The cited art of record has been considered, but is not believed to affect the patentability of the presently pending claims.


CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this Amendment and Response to Restriction Requirement. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

By:



David Rodack, Reg. No. 47,034

Thomas, Kayden, Horstemeyer & Risley, LLP
100 Galleria Pkwy, NW
Suite 1750
Atlanta, GA 30339
770-933-9500